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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,803

05/12/2006

Mark Andrew Rowen

ROWE0101PUSA

6967

22045 7590 04/10/2009

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EXAMINER

FRANK, NOAH S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

04/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,803	Applicant(s) ROWEN, MARK ANDREW	
	Examiner NOAH FRANK	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9, 11-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 5 recite the limitation, "being substantially free of cross-linking on its own". There is no support for this in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hovestadt et al. (US 5,453,460).

Considering Claims 1-2: Hovestadt et al. teaches a process for reusing the overspray obtained when spraying water dilutable two-component polyurethane coating compositions by collecting the overspray, reacting the overspray with compounds that are more reactive with isocyanate groups than both water and the compounds containing isocyanate reactive groups, and using the solution or dispersion in a coating composition (Abs). The coating residue can be reconcentrated (extracted) by low pressure evaporation (2:35-45). The recovered overspray can be used in two-component polyurethane coating compositions, with addition of a polyisocyanate as hardener (7:35-40). The dispersion was applied as a two-component polyurethane coating composition (7:35-40). Hovestadt teaches that the coating compositions are made before it has become completely unusable due to the gradually progressing cross-linking reaction (1:60-65), which implies that the coating is substantially free of cross-linking on its own and substantially free of large amounts of gelled paint. Additionally, it must be viscous in order to be applied as a coating.

With regards to the limitation that the paint waste stream be resultant from spray equipment cleaning with wash solvent, as the claim is drawn to a product, the process is irrelevant, so long as it results in the same claimed compound.

Considering Claim 3: Hovestadt et al. teaches the isocyanate being based on hexamethylene diisocyanate (7:1-5).

Considering Claim 11: Hovestadt et al. teaches adjusting the spray viscosity of the coating by adding water (diluting) (Abs).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Hovestadt et al. (US 5,453,460), as applied to claims 1-3 above, and further in view of Moriarty et al. (US 6,692,670), as evidenced by Rubinate 1840 data sheet.

Considering Claim 4: Hovestadt et al. teaches the basic claimed coating as set forth above.

Hovestadt does not teach the claimed MDI. However, Moriarty et al. teaches polymeric MDI comprising less than 48% diisocyanate (MDI) (3:30-35), specifically Rubinate 1840 (3:15-17). Rubinate 1840, as shown from the Rubinate 1840 data sheet, is a 50:50 mix of 4,4'-diphenylmethane diisocyanate (CAS 101-68-8) and polymeric MDI (CAS 9016-87-9). Hovestadt and Moriarty are combinable because they are from the same field of endeavor, namely isocyanate binders. At the time of the invention a person of ordinary skill in the art would have found it obvious to have used the polymeric MDI, as taught by Moriarty, in the invention of Hovestadt, as an equivalent alternative isocyanate.

Claims 5-9 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hovestadt et al. (US 5,453,460) in view of Patzelt et al. (US 5,766,370) and applicant's admission of prior art.

Considering Claims 5 and 14: Hovestadt et al. teaches a process for reusing the overspray obtained when spraying water dilutable two-component polyurethane coating compositions by collecting the overspray, reacting the overspray with compounds that are more reactive with isocyanate groups than both water and the compounds containing isocyanate reactive groups, and using the solution or dispersion in a coating composition (Abs). The coating residue can be reconcentrated (extracted) by low pressure evaporation (2:35-45). The recovered overspray can be diluted (8:25-30) and used in two-component polyurethane coating compositions, with addition of a polyisocyanate as hardener (reactive to epoxide) (7:35-40). The dispersion was applied as a two-component polyurethane coating composition (7:35-40). Hovestadt teaches that the coating compositions are made before it has become completely unusable due to the gradually progressing cross-linking reaction (1:60-65), which implies that the coating is substantially free of cross-linking on its own and substantially free of large amounts of gelled paint. Additionally, it must be viscous in order to be applied as a coating.

Hovestadt does not teach the paint waste stream being resultant from spray equipment cleaning with wash solvent. However, applicant has admitted that, "Each trade typically uses a wash solvent to clean equipment" (¶0015), and that, "When spray equipment is cleaned of paint with wash solvents, a waste stream consisting of paint

Art Unit: 1796

and wash solvent is created" (§0002). At the time of the invention a person of ordinary skill in the art would have found it obvious to have used a waste stream resultant from spray equipment cleaning with wash solvent, in the invention of Hovestadt, as an equivalent alternative waste stream.

Hovestadt does not teach placing the paint waste stream in a still, separating the solvent, and then extracting the paint residue. However, Patzelt et al. teaches a paint overspray treatment by feeding a spent emulsion into a reaction vessel, the reaction vessel operating under a vacuum and at a temperature sufficient to generate a volatilized organic solvent component (still), and removing residual material remaining in the reaction vessel after volatilizing the organic solvent (4:15-35). Hovestadt and Patzelt are analogous art because they are from the same field of endeavor, namely paint overspray recovery. At the time of the invention a person of ordinary skill in the art would have found it obvious to have extracted the paint residue, as taught by Patzelt, in the invention of Hovestadt, in order to efficiently remove excess solvent from the paint residue.

Considering Claims 6-7: Hovestadt et al. teaches reacting the isocyanate in an equivalent (stoichiometric) amount to hydroxyl groups (7:55-60).

Considering Claims 8-9 and 13: Hovestadt does not teach purifying the residue according to specific gravity before combining with hardening agents and pigments. However, applicant has admitted that it is well known in the art that upon standing, paints will settle out with the heavy pigments falling to the bottom and the clear resin solution sitting on top and that this process can be accelerated using an industrial

decanter or centrifuge (high speed rotation) (4:15-25 of instant specification). At the time of the invention a person of ordinary skill in the art would have found it obvious to have removed pigments according to specific gravity, as taught by applicant, followed by addition of the curing agent and new pigments, in order to make a coating of a different color, thereby adapting the claimed method to multiple scenarios.

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Hovestadt et al. (US 5,453,460), as applied to claim 1 above.

Considering Claim 12: Hovestadt et al. teaches the basic claimed process as set forth above. In addition, Hovestadt et al. teaches adjusting the spray viscosity of the coating by adding water (diluting) (Abs).

Hovestadt does not teach the amount of thinning solvent used. However, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. MPEP 2144.05 The amount of diluent can be adjusted to obtain a coating of the desired viscosity.

Response to Arguments

Applicant's arguments filed 2/17/09 have been fully considered but they are not persuasive.

In response to applicant's arguments that the overspray of Hovestadt is cross-linkable on its own, the claim is not understood to be incapable of cross-linking, but free of cross-linked functionality. Additionally, this limitation is new matter.

In response to applicant's arguments regarding claim 11, Hovestadt clearly teaches "adjusting the spray viscosity of the coating compositions to a suitable spray viscosity by either removing or adding water" (Abs).

In response to applicant's arguments regarding Patzelt, while it appears that Patzelt teaches recovering the solvent from a paint residue, the process of separating solvent from a paint residue is the same, whether or not one's goal is to retain the solvent or the residue. In addition, Hovestadt gives motivation to remove solvent from the overspray in order to adjust the spray viscosity (Abs). The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's arguments that the active isocyanate groups are not removed by merely masked through the added compounds, the so called "masking" is a chemical reaction of the isocyanate and isocyanate-reactive groups, and is not generally easily reversible, except when carefully chosen blocking agents are used. The reaction of these isocyanate groups prevents the overspray from hardening.

In response to applicant's arguments regarding claim 12, Hovestadt teaches "adjusting the spray viscosity of the coating compositions to a suitable spray viscosity by either removing or adding water" (Abs). Hovestadt does not teach the amount of water (solvent) to add, which is merely experimental modification, as Hovestadt clearly teaches that amount of solvent is a result-effective variable.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOAH FRANK whose telephone number is (571)270-3667. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/595,803
Art Unit: 1796

Page 10

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/Harold Y Pyon/
Supervisory Patent Examiner, Art
Unit 1796